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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,393	02/13/2006	Kai Desinger	3288	5577
21834 7590 07/27/2009 BECK AND TYSSER P.L.L.C. 2900 THOMAS AVENUE SOUTH SUITE 100 MINNEAPOLIS, MN 55416				
EXAMINER				
SCOTT, AMANDA L				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/517,393

**Applicant(s)**

DESINGER ET AL.

**Examiner**

AMANDA SCOTT

**Art Unit**

3739

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-21 and 23-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-21 and 23-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

Receipt is acknowledged of amendment filed 04/17/2009. Claims 1, 3-21, and 23-30 are pending. Claims 2 and 22 have been cancelled. An action on the merits is as follows.

### ***Specification***

1. The disclosure is objected to because of the following informalities: Claims 5 and 6 are objected to as not being disclosed in the specification. Claims 5 and 6 depend from independent claim 1; the amendment of claim 1 added an air cushion feature to the cable. The specification does not disclose an air cushion within the cable when the lines are twisted together (claim 5) as well as when the lines extend in a mutually coaxial relationship (claim 6).

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
5. **Claims 1, 3, 6-8, 12-13 and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Berube (6,471,696) in view of Fenton (2,804,494).

**Regarding claim 1**, Berube et al. discloses a high frequency application apparatus comprising a high frequency generator, a probe arrangement which is connected to the high frequency generator and which includes at least two electrodes (view figure 2, (102 /104)), and at least two lines which connect the electrodes to the high frequency generator, characterized in that the lines are combined together in a common cable and extend in mutually parallel relationship at least over a part of the length of the cable at a defined spacing which is between 1 mm and 25 mm (view figure 2, (108/110), but fails to disclose the lines are characterized by an air cushion positioned between the lines within the cable. However, Fenton discloses a high frequency transmission cable that has lines that are parallel over at least a part as well

as having an air cushion between the lines (view figures 1-5). It would have been obvious at the time the invention was made to have the transmission line (9) of Berube have an air cushion between the individual lines as shown in Fenton. Doing so would add air as a dielectric to separate the individual transmission lines. Someone skilled in the electrical connection art would be able to incorporate this type of a connection line with surgical instruments that are connected to energy sources, since the air cushion provides the dielectric and increased electrical isolation for the cable.

**Regarding claim 3**, Berube et al. discloses a high frequency application apparatus as set forth in claim 1 characterized in that the lines extend separately at the end of the cable towards the generator (view figure 1 (26); column 3, lines 46-48)). Berube does not explicitly show the lines separated, however the wires would have to split in order for the connector to work with the generator when connected.

**Regarding claim 6**, Berube et al. discloses a high frequency application apparatus characterized in that the lines extend in mutually coaxial relationship (column, 4 lines 34-40).

**Regarding claim 7**, Berube et al. discloses a high frequency application apparatus characterized in that the probe arrangement includes an electrode needle (view figure 9). The device described by Berube et al. performs like that of a needle electrode

**Regarding claim 8**, Berube et al. discloses a high frequency application apparatus as set forth in claim 6 characterized in that the electrode needle includes at least two active electrodes (view figure 2, 102/104).

**Regarding claim 12**, Berube et al. discloses a high frequency application apparatus characterized in that the cable is provided with an electrically conductive shield or casing (column 4, lines 33-49).

**Regarding claim 13**, Berube et al. discloses a high frequency application apparatus characterized in that the shield or the casing includes a connection by way of which it is to be electrically connected to a shielding means of a nuclear magnetic resonance tomograph (column 4, lines 45-49).

**Regarding claim 21**, Berube et al discloses a high frequency application apparatus characterized in that the probe arrangement and the cable are adapted to be re-sterilizable (column 4, lines 43 -45).

6. **Claims 4 and 5** are rejected under 35 U.S.C. 103(a) as being unpatentable over Berube (US 6,471,696) in view of Fenton (US 2,804,494) in further view of (Baumgartner et al. (US 3,809,846).

**Regarding claim 4**, Berube in view of Fenton discloses a high frequency application apparatus (view figure 2) but fails to disclose a line includes a plurality of wires. However, Baumgartner et al. discloses a line including a plurality of wires (column 2, lines 67-68; column 3, lines 1-4).

It would have been obvious to one having ordinary skill in the art at the time of invention to exchange one type of line disclosed by Berube in view of Fenton with the line having a plurality of wires disclosed by Baumgartner. Doing so would decrease the interference between the wires.

**Regarding claim 5**, Berube in view of Fenton et al discloses a high frequency application apparatus (view figure 2), but fails to disclose the lines and/or the wires are twisted together. However, Baumgartner discloses the lines and/or lines are twisted together (column 2, lines 67-68; column 3, lines 1-4).

It would have been obvious to one having ordinary skill in the art at the time of invention to exchange one type of line disclosed by Berube in view of Fenton with the line having the lines and/or wires twisted together disclosed by Baumgartner. Doing so would decrease the interference between the wires.

7. **Claims 9 and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Berube (US6,471,696) in view of Fenton (US 2,804,494) in further view of Lorentzen (US 5,951,546).

**Regarding claim 9**, Berube in view of Fenton et al. discloses a high frequency application apparatus (view figure 2) but fails to disclose the probe arrangement includes an electrode needle and a neutral electrode to be applied externally to the body. However, Lorentzen discloses the probe arrangement includes an electrode needle and a neutral electrode to be applied externally to the body (column 10, lines 41-56).

It would have been obvious to one having ordinary skill in the art to combine the high frequency application apparatus taught by Berube in view of Fenton with the probe arrangement includes an electrode needle and a neutral electrode to be applied externally to the body taught by Lorentzen. Doing so allows for an easier insertion into

the target tissue as well as allowing the ground to be placed on the body of the patient and not in the patient to create a monopolar type arrangement.

**Regarding claim 10**, Berube in view of Fenton et al. discloses a high frequency application apparatus (view figure 2) but fails to disclose the electrode needle includes at least one active electrode. However, Lorentzen discloses the probe the electrode needle includes at least one active electrode (column 10, lines 41-56).

It would have been obvious to one having ordinary skill in the art to combine the high frequency application apparatus taught by Berube in view of Fenton with the electrode needle includes at least one active electrode by Lorentzen. Doing so allows for an easier insertion into the target tissue by using a sharpened distal end needle electrode.

8. **Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over Berube (US 6,471,696) in view of Fenton (US 2,804,494) in further view of Sommer (US 4,972,459).

**Regarding claim 11**, Berube in view of Fenton et al discloses a high frequency application apparatus (view figure 2) but fails to disclose a ferrite core is mounted on the cable. However, Sommer discloses a ferromagnetic core that surrounds the cable, this material that surrounds the cable acts as a ferrite core mounted on the cable.

It would have been obvious to one having ordinary skill in the art to combine the high frequency application apparatus taught by Berube in view of Fenton with the ferromagnetic material surrounding the cable taught by Sommer. Doing so helps to reduce the noise and any interference generated by high frequency generators.



9. **Claims 15, 23, 25, 27-28** are rejected under 35 U.S.C. 103(a) as being unpatentable over Berube (US 6,471,696) in view of Fenton (US 2,804,494) in further view of D'Amelio (US 4,823,791).

**Regarding claim 15**, Berube in view of Fenton et al. discloses a high frequency application apparatus wherein the lines have a portion towards the generator and a portion towards the probe(view figure 2), but fails to disclose between which is a switching device for separating and connecting the generator-end portion and the probe-end portion. However, D' Amelio et al. discloses a switching device for separating and connecting the generator-end portion and the probe-end portion (column 15, lines 52-54).

It would have been obvious to one having ordinary skill in the art to combine the high frequency apparatus having lines toward the generator and towards the probe taught by Berube in view of Fenton et al. with the switching device taught by D' Amelio. Doing so would allow the operator to control the energy directed to the probe by a simple switch.

**Regarding claim 23**, Berube in view of Fenton et al. discloses a high frequency application apparatus (view figure 2), but fails to disclose the switching device includes an electrical switch. However D' Amelio discloses a switching device (column 15, lines 52-54). It is inherent that a switch can turn on/off power. Any switching device could be used.

It would have been obvious to one having ordinary skill in the art to combine the high frequency application apparatus taught by Berube in view of Fenton with the

switching device taught by D' Amelio. Doing so would allow the operator to control the energy directed to the probe by a simple switch.

**Regarding claim 25**, Berube in view of Fenton et al discloses a high frequency application apparatus (view figure 2), but fails to disclose the electrical switch is a reed relay. However, D'Amelio discloses a switching device (column 15, lines 52-54). It is inherent that a switch can turn on/off power. Any switching device could be used.

It would have been obvious to one having ordinary skill in the art to combine the high frequency application apparatus taught by Berube in view of Fenton with the switching device taught by D' Amelio. Doing so would allow the operator to control the energy directed to the probe by a simple switch.

**Regarding claim 27**, Berube in view of Fenton et al discloses a high frequency application apparatus (view figure 2) but fails to disclose the switching device includes a mechanical switch. However, D' Amelio discloses a switching device (column 15, lines 52-54). It is inherent that a switch can turn on/off power. Any switching device could be used.

It would have been obvious to one having ordinary skill in the art to combine the high frequency application apparatus taught by Berube in view of Fenton with the switching device taught by D' Amelio. Doing so would allow the operator to control the energy directed to the probe by a simple switch.

**Regarding claim 28**, Berube in view of Fenton et al. discloses a high frequency application apparatus (view figure 2) but fails to disclose the switching device includes a signal line and an actuating switch which are of such an arrangement and configuration

that separation and connection can take place in the room in which the high frequency generator is disposed. However, D'Amelio discloses the switching device includes a signal line and an actuating switch which are of such an arrangement and configuration that separation and connection can take place in the room in which the high frequency generator is disposed(column 14, lines 31-32; column 15, lines 52-54)).

It would have been obvious to one having ordinary skill in the art at the time of invention to combine the high frequency application apparatus taught by Berube in view of Fenton with the switching device includes a signal line and an actuating switch which are of such an arrangement and configuration that separation and connection can take place in the room in which the high frequency generator is disposed taught by D'Amelio. Doing so would allow the apparatus to operate near the magnetic resonance machine, which is a typical set up when dealing with magnetic resonance.

10. **Claim 29** is rejected under 35 U.S.C. 103(a) as being unpatentable over Berube (US 6,471,696) in view of Fenton (US 2,804,494) in further view of Osakada (US 6,308,239).

**Regarding claim 29**, Berube in view of Fenton et al discloses a high frequency application apparatus (view figure 2) but fails to disclose the switching device includes an interface for the connection of a control line to a nuclear magnetic resonance tomograph. However, Osakada et al. discloses a switching device includes an interface for the connection of a control line to a nuclear magnetic resonance tomograph (column 11, lines 55-63).

It would have been obvious to one having ordinary skill in the art at the time of invention to combine the high frequency application apparatus taught by Berube in view of Fenton with the switching device disclosed by Osakada. Doing so would allow the switching device to control the energizing of the probe in accordance with when the magnetic resonance machine is used.

11. **Claims 14, 16-19, 22, 24, 26, 30** are rejected under 35 U.S.C. 103(a) as being unpatentable over D'Amelio (US 4,823,791) in view of Fenton (US 2,804,494).

**Regarding claim 14**, D' Amelio et al discloses a high frequency application apparatus comprising a high frequency generator, a probe arrangement which is connected to the high frequency generator and which includes at least two electrodes, and at least two lines at least partially encased in a cable, said lines connecting the electrodes to the high frequency generator, characterized in that the lines have a portion towards the generator and a portion towards the probe (view figure 11, the wire leads are combined in a single line; column 8, lines 9-34), between which is a switching device for separating and connecting the generator-end portion and the probe-end portion (column 15, lines 52-54), but fails to disclose an air cushion between the lines within the cable. However, Fenton discloses a high frequency transmission cable that has lines that are parallel over at least a part as well as having an air cushion between the lines (view figures 1-5).

It would have been obvious at the time the invention was made to have the transmission line (9) of D'Amelio have an air cushion between the individual lines as shown in Fenton. Doing so would add air as a dielectric to separate the individual

transmission lines. Someone skilled in the electrical connection art would be able to incorporate this type of a connection line with surgical instruments that are connected to energy sources, since the air cushion provides the dielectric and increased electrical isolation for the cable.

**Regarding claim 16**, D' Amelio discloses a high frequency application apparatus characterized in that the switching device includes an electrical switch (column 8, lines 9-34; column 15, lines 52-54). It is inherent that a switch can turn off/on power to the probe. Any switch can perform this.

**Regarding claim 17**, D' Amelio discloses a high frequency application apparatus characterized in that the electrical switch is a reed relay(column 8, lines 9-34; column 15, lines 52-54). It is inherent that a switch can turn off/on power to the probe. Any switch can perform this.

**Regarding claim 18**, D' Amelio discloses a high frequency application apparatus characterized in that the switching device includes a mechanical switch. (column 8, lines 9-34; column 15, lines 52-54). It is inherent that a switch can turn off/on power to the probe. Any switch can perform this.

**Regarding claim 19**, D' Amelio discloses a high frequency application apparatus characterized in that the switching device includes a signal line and an actuating switch which are of such an arrangement and configuration that separation and connection can take place in the room in which the high frequency generator is disposed (column 14, lines 31-32; column 15, lines 52-54)).

**Regarding claim 22**, D'Amelio discloses a high frequency application apparatus wherein the lines have a portion towards the generator and a portion towards the probe, between which is a switching device for separating and connecting the generator-end portion and the probe-end portion (column 15, lines 52-54).

**Regarding claim 24**, D' Amelio discloses a high frequency application apparatus characterized in that the switching device includes an electrical switch (column 8, lines 9-34; column 15, lines 52-54). It is inherent that a switch can turn off/on power to the probe. Any switch can perform this.

**Regarding claim 26**, D' Amelio discloses a high frequency application apparatus characterized in that the electrical switch is a reed relay(column 8, lines 9-34; column 15, lines 52-54). It is inherent that a switch can turn off/on power to the probe. Any switch can perform this.

**Regarding claim 30**, D'Amelio in view of Fenton discloses a high frequency application apparatus but fails to explicitly disclose that the probe arrangement and the cable are adapted to be re- sterilizable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the probe and cable be re-sterilizable, since equipment that is reused in medical procedures needs to be sterilized.

12. **Claim 20** is rejected under 35 U.S.C. 103(a) as being unpatentable over D'Amelio (US 4,823,791) in view of Fenton (US 2,804,494) in further view of Osakada (US6,308,239)

**Regarding claim 20**, D' Amelio in view of Fenton discloses a high frequency application apparatus (column 8, lines 9-34) but fails to disclose the switching device includes an interface for the connection of a control line to a nuclear magnetic resonance tomograph. However, Osakada et al. discloses a switching device includes an interface for the connection of a control line to a nuclear magnetic resonance tomograph (column 11, lines 55-63).

It would have been obvious to one having ordinary skill in the art at the time of invention to combine the high frequency application apparatus taught by D'Amelio in view of Fenton with the switching device disclosed by Osakada. Doing so would allow the switching device to control the energizing of the probe in accordance with when the magnetic resonance machine is used.

#### ***Response to Arguments***

13. Applicant's arguments with respect to claims 1, 3-21 and 23-30 have been considered but are moot in view of the new ground(s) of rejection.

14. The original rejection using Berube for the air cushion read on the limitation in its broadest interpretation. By adding the air cushion to the cable in independent claim 1, the air cushion is more specific as to where it fell in the overall cable line.

#### ***Conclusion***

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMANDA SCOTT whose telephone number is (571)270-7103. The examiner can normally be reached on Monday thru Thursday, 8:00 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda Dvorak can be reached on (571)272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. S./  
Examiner, Art Unit 3739

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